

## **REMARKS**

### **The Amendments**

Claims 1 and 13 are amended to further define the variable Y<sup>11</sup>. The amendment is made to distinguish the cited prior art, as discussed below. Support for the amendment is found in the specification, for example, at page 3, lines 9-10. Claims 2 and 3, indicated in the Office Action to be allowable if rewritten in independent form, are so rewritten. Claims 4 and 6-11 depend from these claims and, thus, should also be allowable. New claims 21 and 22 are supported by original claims 2 and 3, for example.

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to Applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

### **The Rejection under 35 U.S.C. § 102 over Rieger**

The rejection of claims 13-20 under 35 U.S.C. § 102, as being anticipated by Rieger (U.S. Patent No. 5,397,505) is respectfully traversed.

It is respectfully submitted that the above amendment of claim 13 renders this rejection moot. Rieger has a broad generic disclosure of compounds for liquid crystalline media of the formula I; see, e.g., col. 3. Despite this generic formula, however, Rieger has no specific

disclosure of any compound within this formula wherein L is F and X is OCF<sub>3</sub>. In the 22 composition examples of the reference, there are a number of compounds disclosed of the designation CP-nOCF<sub>3</sub>, however, such compounds lack an F, fluoro atom, at the position corresponding to L of Rieger's formula I. Compare the definition of Y<sup>11</sup> in the instant claim 13. In the absence of a specific embodiment or specific evidence to suggest that the reference inventors were in possession of a compound meeting all the claims elements, there can be no anticipation. A mere broad generic disclosure without any specific direction as to the specific element necessary to provide an anticipation is not an anticipatory disclosure. In other words, such a broad generic disclosure does not "describe" an embodiment therein in accordance with 35 U.S.C. § 102. See In re Kollman et al, 201 USPQ 193 (CCPA 1979). If such a reference were anticipatory, it would not be possible to prove nonobviousness for selection inventions within a generic disclosure. Such is not the state of the law.

Accordingly, the rejection under 35 U.S.C. § 102 should be withdrawn.

#### **The Rejection under 35 U.S.C. §§ 102/103 over Andou**

The rejection of claims 1 and 5 under 35 U.S.C. § 103, as being anticipated by or obvious over Andou (U.S. Patent No. 6,190,576) is respectfully traversed.

Andou provides an even more broad generic formula than Rieger, i.e., formula I, col. 6. It also discloses an optional second component of any of formulae (2) - (12). Like Rieger, however, Andou has no specific disclosure of any compound within this formula wherein the right-side terminal benzene group has a lateral F group and a terminal -OCF<sub>3</sub> group. Compare amended claim 1. In fact, formula (I) of Andou excludes such compounds by proviso. It states

(at col. 6, lines 25-29) that when any of  $X^1-X^3$  is  $-COO-$ , at least one of the A rings is 2,3-difluoro-1,4-phenylene and  $Y^1$  is alkoxy, thus, excluding the compounds of Applicants' formula I. Even with the optional second components, Andou's disclosure is lacking any specific disclosure meeting Applicants' formula I despite that it contains 53 composition examples each with a number of components and the very large table listing 691 specific compounds. In analogy to the analysis of Rieger above, Andou cannot anticipate the instant claims in the absence of any specific disclosure or teaching meeting all elements of the claim recitations. Thus, the rejection based on anticipation under 35 U.S.C. § 102 should, at least, be withdrawn.

Applicants respectfully further submit that one of ordinary skill in the art would not have been motivated by the Andou disclosure to provide compounds meeting all elements of the applicants' claims, despite the generic disclosure thereof. As was clearly set forth in In re Jones, 21 USPQ 2d 1941 (Fed. Cir. 1992), it is not the law that "... regardless of how broad, a disclosure of a chemical genus renders obvious any species which happens to fall within it." Instead, the disclosure must be considered as a whole as to whether it fairly suggests the claimed invention to one of ordinary skill in the art. See also In re Baird, 29 USPQ2d 1550 (Fed. Cir. 1994).

The breadth of the generic formulae and possible combinations in Andou is extreme. As pointed out above, the proviso for Andou's formula (I) excludes Applicants' compounds. Thus, rather than suggesting the compounds, there is one teaching away from them there. Andou could only include such compounds if they were an optional component under one of formulae (2)-(12). Only one of these formulae, i.e., formula (3), encompasses compounds of a structure like Applicants' formula I. However, to arrive at compounds meeting Applicants' formula I, one of ordinary skill in the art would have to: a) first decide to include an optional second

component, b) pick a component of the formula (3) from the 11 possible second component formulae, and c) pick a specific definition of each of the 7 variables in formula (3) from among a number of possible selections for each of these 7 variables. There is no direction to one of ordinary skill in the art to make all of these selections other than by using Applicants' own disclosure as a blueprint to follow, which, of course, is improper to do to support a rejection under 35 U.S.C. § 103; see, e.g., Grain Processing v. American Maize, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). Further, rather than giving guidance towards Applicants' compounds, the fact that there are so many examples of specific compounds in Andou and none of them meet Applicants' claim elements directs one of ordinary skill in the art away from such compounds.

For these reasons, it is urged that Andou fails to fairly suggest the instant claimed invention to one of ordinary skill in the art. Thus, the rejection under 35 U.S.C. § 103 should also be withdrawn.

#### **The Rejection under 35 U.S.C. § 103 over Andou in view of Nishiyama**

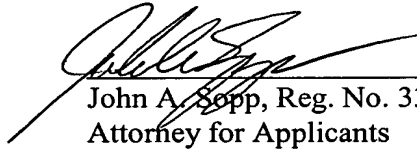
The rejection of claim 12 under 35 U.S.C. § 103 as being obvious over Andou in view of Nishiyama (U.S. Patent No. 6,331,064) is respectfully traversed.

Andou is discussed above and that discussion is incorporated by reference herein. Nishiyama was cited for its teachings regarding addressing pixels in an active matrix. Nishiyama provides no teachings which would suggest use of compounds of Applicants' formula I or suggest modification of Andou to provide such compounds. Thus, the deficiencies of Andou, discussed above, to suggest such compounds applies equally to this combination of references. Therefore, the rejection under 35 U.S.C. § 103 should be withdrawn for the same reasons stated above.

It is submitted that the claims are in condition for allowance. However, the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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Attorney Docket No.: MERCK-2224

Date: November 27, 2002



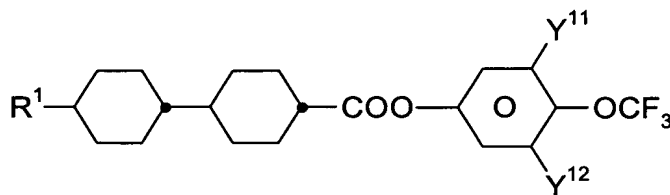
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Amend claims 1-3 and 13 to read as follows:

1. (Amended) An electro-optical liquid-crystal display having a realignment layer for realigning the liquid crystals whose field has a component, which is crucial for the realignment, parallel to the liquid-crystal layer, containing a liquid-crystalline medium of positive dielectric anisotropy,

which medium comprises one or more compounds of the formula I



I

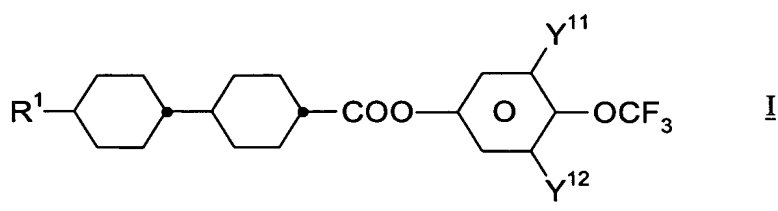
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in which

- R<sup>1</sup> is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms, and
- Y<sup>11</sup> is F, and
- Y<sup>12</sup> ~~are each, independently of one another,~~ is H or F.

2. (Amended) ~~A liquid-crystal display according to Claim 1, wherein~~

An electro-optical liquid-crystal display having a realignment layer for realigning the liquid crystals whose field has a component, which is crucial for the realignment, parallel to the liquid-crystal layer, containing a liquid-crystalline medium of positive dielectric anisotropy,  
which medium comprises one or more compounds of the formula I



in which

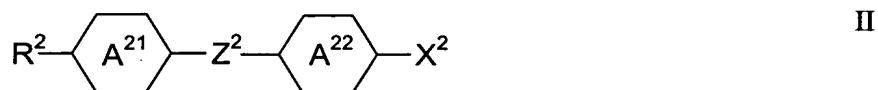
R¹ is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or  
alkoxyalkyl having 2 to 7 carbon atoms,

Y¹¹ is F, and

Y¹² is H or F;

and

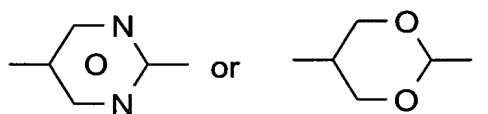
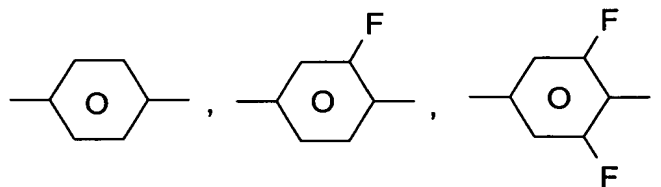
the medium further comprises at least one compound of the formula II:



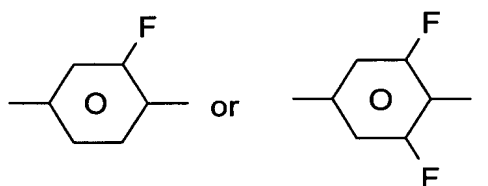
in which

$R^2$  is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,

$A^{21}$  and  $A^{22}$  are each, independently of one another,



provided that at least one of  $A^{21}$  and  $A^{22}$  is



$X^2$  is F, Cl or CN,

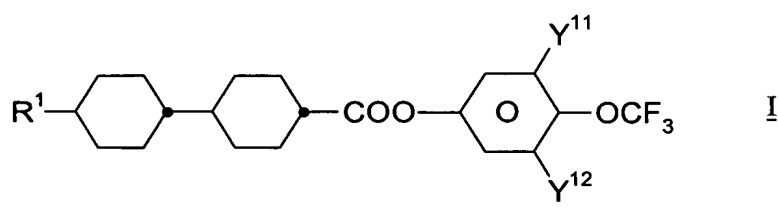
and

$Z^2$  is  $CH_2CH_2$ ,  $COO$ ,  $CF_2O$  or a single bond.



3. (Amended) ~~A liquid crystal display according to Claim 1, wherein~~

An electro-optical liquid-crystal display having a realignment layer for realigning the liquid crystals whose field has a component, which is crucial for the realignment, parallel to the liquid-crystal layer, containing a liquid-crystalline medium of positive dielectric anisotropy,  
\_\_\_\_\_ which medium comprises one or more compounds of the formula I



\_\_\_\_\_ in which

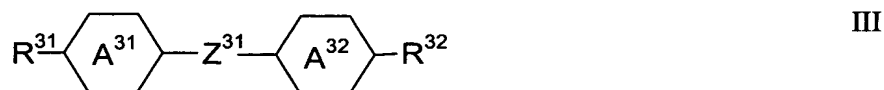
R¹ \_\_\_\_\_ is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or  
alkoxyalkyl having 2 to 7 carbon atoms,

Y¹¹ \_\_\_\_\_ is F, and

Y¹² \_\_\_\_\_ is H or F;

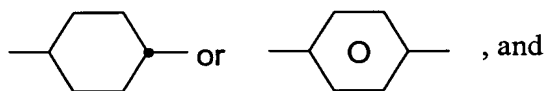
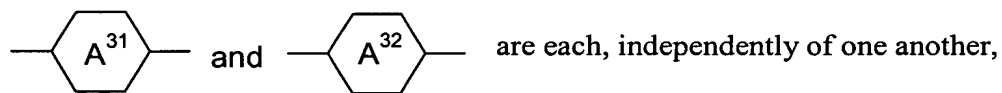
and

the medium further comprises at least one compound of the formula III



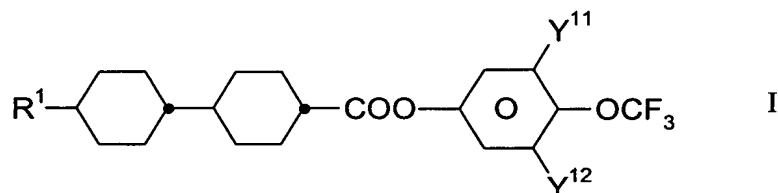
in which

$R^{31}$  and  $R^{32}$  are each, independently of one another, alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



$Z^{31}$  is  $CH=CH$ ,  $COO$ ,  $CH_2CH_2$  or a single bond.

13. (Amended) A liquid-crystalline medium comprising one or more compounds of the formula I



in which

$R^1$  is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms, and

$Y^{11}$  is F, and

$Y^{12}$  ~~are each, independently of one another,~~ is H or F.